HEALING WITH COHERENT EMISSIONS OF LIGHT

According to the biophoton emission theory, the key to life and its biochemical and communication processes is Light.

Part 1 of 2

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BIOPHOTONS – THE LIGHT OF OUR CELLS

Light is linked to life functions and life force. In fact, organic life absorbs light, 'processes' it and emits it. To understand this, we need to look at several pioneering and revolutionary discoveries in this 'novel' science of light. Indeed, they represent the very basis of a colour therapy that I have developed.

In 1922, the Russian doctor and histologist Alexander Gurwitsch and his wife observed that onion cells separated by quartz glass were able to communicate. He assumed that it was a transmission of information via UV radiation.

Only as late as 1954 was it possible to measure this weak luminescence radiation with the help of a new device called a *photomultiplier*. Seedlings of several plants were used to carry out the measurement. The spectrum of the light radiation was between the red and the green field of visible light and showed an intensity of several tens to a hundred photons per second and square centimetre per emission.

In the 1970s, the German biochemist Fritz-Albert Popp asked himself how it was possible that the high loss of cells in the body is always in balance by regenerating on the same timing. Our body is the greatest marvel of nature. Our heart beats 100,000 times every day, we take over 25,000 breaths a day, and every second 10 million cells die and are replaced by new ones. How is this exact timing possible?

Our body seems to possess a dense material shape that is clearly defined. However, on the atomic level we are somebody different every second! Most of our approximately 100 billion cells are constantly replacing themselves. Even our DNA is subject to a continuous regeneration program. The pancreas replaces most of its cells every 24 hours; the cells of the stomach lining are reproduced every three days, white blood cells renewed every 10 days, new skin every four weeks; and bones can even regenerate themselves. On the atomic level, our body renews itself completely, almost 100 per cent, every four years.

In order to replace the dead cells, our body extracts nutrition from the food offered and knows with amazing accuracy to absorb exactly the substances it needs. So how can this process of sub-molecular precision occur even when we eat irregularly or even when our body does not get sufficient amounts of the correct building blocks such as vitamins, enzymes and amino aids? Where does this life energy come from and how does the body work with it? Many researchers have set up experiments in order to find answers to this very question.

An innovative answer in this area of research came in 1975 from a laboratory in Kaiserslautern. Popp was now able to demonstrate the ultra-weak cell luminescence, and he called it *biophoton emission.* According to Popp, the key to the elementary code of life, the communication between all forms of life, the control factor of the biological organism, is simply *light.*[1]

An interesting experiment demonstrates this. Two glasses containing fresh pig's blood are put side by side. An agent is added to one glass and the blood reacts immediately by producing antibodies. But then the observer notices that the blood in the second glass has also started to produce antibodies, although no agent was added. If you carry out the very same experiment with two new glasses but put a wall opaque to light between those two glasses, the information to produce antibodies will not be transmitted to the blood in the second glass.

Biophotons, Popp observed, behave like a laser as message transmitters and serve to control biochemical processes. It has been demonstrated that no biochemical reaction on

the level of molecules is capable of managing such a transmission of information in such a short time-frame.

At the beginning, these revolutionary results were declared as metaphysical and thus considered to be unscientific. However, despite the ridicule from mainstream science, some worldwide research teams are actually working in this area. And the results of biophoton emission research are being used in industry and medicine, especially in the wellness movement. I am integrating these revolutionary, proven results regarding the coherence and meaning of light in our cells in my therapeutic work with colour.

Nowadays, single photons can be measured per minute, even per second. The value is expressed in a range from 10^{-19} up to 10^{16} watts per square centimetre. Daylight is about 10^{18} times more intense.

Biophoton emission must not be confused with thermal radiation or bioluminescence.

The more vital a system, the more intense is the motion of the photons and the stronger the photon emission will be and the longer it will be possible to store light in the cells. However, photon emission is very weak and can only be demonstrated with much effort and at a very high cost. Biophoton emission must not be confused with thermal radiation or bioluminescence.[2]

Thanks to high-frequency photography, which was developed in the 1950s, it is possible to show that not just the stars radiate but so too do human bodies. Kirlian photography was developed by the Russian couple Kirlian and Krisanowa between the years 1939–1958. Thanks to this method, the aura could be demonstrated to Western awareness for the very first time; the concepts of subtle energies, auras and meridians had already been long established in China and India and in some other ancient cultures.

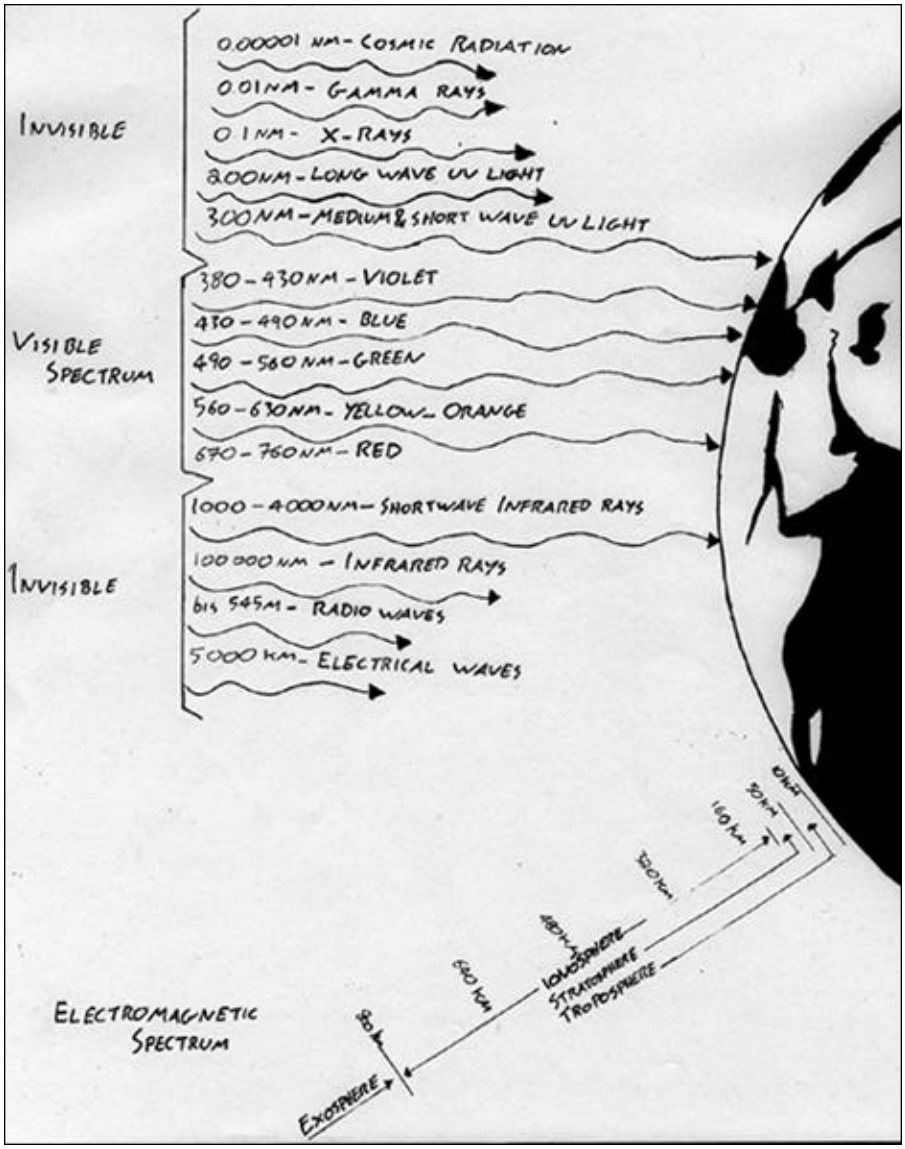

Illustration 1

BIOPHOTON EMISSIONS

Without light, there would be no life on Earth. The Sun is the greatest heat source and energy provider in our solar system. It emits a wide spectrum of energies that can enter into the Earth's atmosphere to varying degrees. Five per cent of the emitted solar energy that enters the Earth's atmosphere is ultraviolet (UV) light. **Illustration 1** shows the radiation spectrum of the Sun, and the wavelength and degree of absorption by the Earth's atmosphere.[3]

DNA and RNA have an inbuilt ability to repair themselves. Research about the self-repair mechanism of DNA and RNA has shown that the repair enzymes of DNA and RNA can only work with UV light. This is why this process is called *photo repair*. In experiments, laboratory animals that were kept in light, but with the UV part of the light spectrum removed, developed serious illnesses.

Colours are the children of light, which means they occur when light hits an object. Then light is: (a) mirrored or reflected (a white object reflects all photons); (b) swallowed or absorbed (a black object absorbs all photons); or (c) passed through something (e.g., a window) or deflected or broken (by entering a different medium like water).

Light travels at a speed of 300,000 kilometres per second in a vacuum. This speed is reduced if light has to pass through a transparent medium. When light passes through water, its speed is slower than when it passes through air. When light enters matter like glass or water, its speed slows down.

However, in January this year, two separate scientific institutes in the USA succeeded in stopping light for the first time.[4] Light was sent through an optically activated supercooled sodium vapour. This made it possible to stop light very briefly before letting it continue to travel on.[5]

Colours are measured in waves from peak to peak, and the measuring parameter is the nanometre (nm). Red can be found between 670–760 nm, yellow, orange and pink between 560–630 nm, green at 490–560 nm, blue at 430–490 nm and violet between 380–430 nm (**illustrations 1, 2**). Violet light is more curved than red light because it has a shorter wavelength and it can be deflected more. There are as many different listings of nanometre citations for the wavelengths of the colours and other emissions of the Sun as there are scientific books dealing with this very issue!

The mass of an atom's nucleus and electrons make up altogether only 0.000000000001%.

The remaining 99.999999999999% is free space.

Through the process of photosynthesis, the Sun's energy is converted into chemical energy by plants and bacteria. Photosynthesis is one of the most significant reactions in nature and a prerequisite for what is generally described as life. Oxygen for breathing is formed by the process of photosynthesis—a process that was 'invented' about 350 x 10^9 years ago. The atmosphere of the Earth at that time contained much more methane, and the current atmospheric oxygen content of 21 per cent was developed by billions of photosynthetic activities using energy and sunlight.

Light has a paradoxical, dual nature; it is both wave and particle at the same time. However, it is impossible to measure wave and particle at the same time with the type of instruments and equipment that are available at present; traditionally, the scientific methods used measure either one subject or the other.

The model of the atom was developed by Rutherford in 1911, and it has turned out to be the basis for our modern understanding of atomic structure and biophotons, even if this model is no longer regarded as correct by many quantum physicists. Electrons spin in orbit around the atomic nucleus in a similar way to how planets spin or rotate as they revolve around the Sun (**illustration 3**). The protons of the nucleus are positively charged and the electrons are negatively charged. When a photon hits an electron, it propels the electron onto the next outer and energetically higher orbit or shell. The electron will move on this shell for as long as it can maintain the new energy given to it by the photon. It then jumps back to its old shell, emitting energy during this process in the form of radiation measured in photons (**illustration 4**). The energy of photons is measured in electrovolts (eV). This is the amount of energy gained by the electron or particle running through a voltage difference with a charge of one volt.[6]

Nobel Prize–winner Niels Bohr designed a new model of the atom in 1913. In this model, which is still the most widely known today, the electrons spin around the nucleus in stable orbits. He assumed that electrons can jump onto or off their orbits by absorbing or emitting a specific amount of energy: the quantum leap theory. The whole idea of an orbit depends on classical physics, whereas the idea of electrons corresponding to fixed amounts of energy levels comes from quantum theory.

Bohr made his atom model by patching together bits of classical theory and bits of quantum theory. Although his theory gave no insight into what makes atoms tick (and this model turned out to be wrong in almost every aspect), it helped him and the other scientists make progress because it provided a transition to a genuine quantum theory for the atom.

But, because this model is so nice and simple—a "seductive picture of the atom as a miniature solar system"[7]—it is still the most widely used model, although it has outstayed its welcome.

Illustration 5 shows the most modern understanding of the atom. Here the atom is embedded in an electromagnetic field. A 3D animation would beautifully demonstrate the vibrating atom and its electrons. The electron is simply something that moves outside the nucleus and has a certain amount of energy and other properties. It moves in mysterious ways. The electron 'likes' to stay near the nucleus.

The uncertainty principle postulated by Heisenberg says an atom's exact position cannot be determined.[8] This is due to the wave characteristics of the particles. "As the electron is much lighter than the nucleus, its uncertainty is much higher and the area where it can be hit is much larger than that of the nucleus."[9] This creates the paradoxical possibility that the same atom may be in different places at the same time.

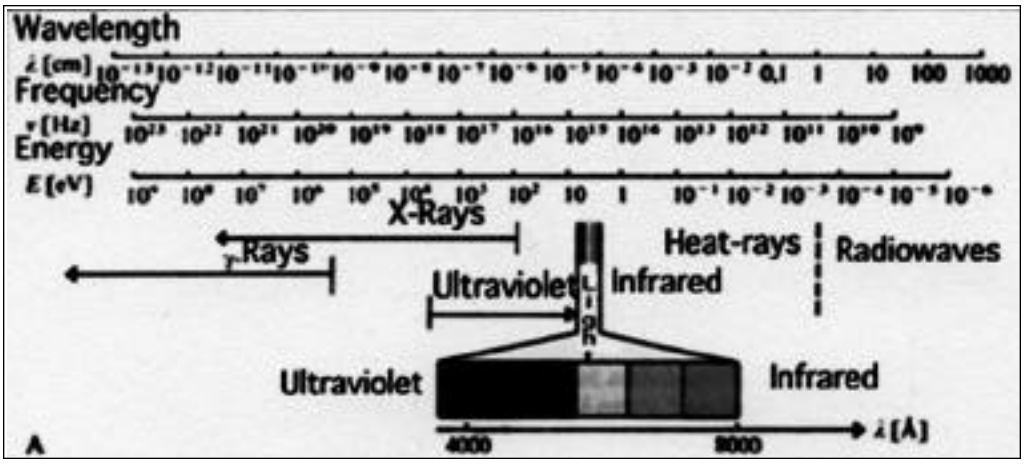

Illustration 2

However, it is important to show these very different models because they:

• are excellent examples of mirroring the changing processes in development;

• show the growing/expanding level of consciousness of scientists;

• illustrate how slowly but gradually such research results enter the minds of school education and the general public after nearly 30 to 50 years;

• illustrate how such developments do not become common knowledge and gain credence in people's minds, despite being widely publicised in many kinds of media;

• represent the basis of our overall understanding of reality.

This rather static model was at its time revolutionary and is still the model predominantly being taught in our schools today. However, it makes a substantial difference whether the world is understood as moving in static orbits or is seen as being embedded in an electromagnetic vibration field. The crucial difference lies in understanding that the movements of the vibration and wave model cannot be calculated exactly but have to be conceived of as a process and in constant motion. All states are possible at all times, and situations can only be predicted with probability. According to our current understanding, they are never exactly calculable and determinable.

The mass of an atom's nucleus and electrons make up altogether only 0.000000000001 per cent; the remaining 99.999999999999 per cent is free space. This corresponds exactly to the distribution of planets and stars in relation to free space in the universe.

Normal cells and tissue as well as biophotons resonate in specific wave patterns ...

Tumour tissue, however, can be defined as having lost its inner coherent program ...

Light not only transmits energy, it is also a source of information and a carrier of information. It carries the signature of its source. "Every chemical element leaves a characteristic fingerprint in its spectrum of light."[10] This knowledge has been used by industry for many decades. One application, spectral analysis, is an important method for identifying and testing atoms and molecules. In spectral analysis, green stems from oxygen whereas blue and violet colours indicate the existence of nitrogen atoms.

Even the number of photons can be estimated in the observable cosmos: approximately 10^{89}—a billion times more than the number of estimated atoms.

The more vital or healthy a body is, the longer an electron can store light, the energy of the photon. That means that the electron can move longer on the outer orbit, thus allowing the atom, the cell, the organ and the entire organism to react more flexibly by adjusting to any modifications.

Popp scientifically proved that free range eggs have a significantly higher capacity to store light than do eggs from chickens kept in battery cages.[11] The same difference is also evident in organically grown tomatoes compared to greenhouse-grown tomatoes. Frozen food radiates less (and more irregular) vitality than fresh food; so do potatoes treated with artificial fertiliser, compared with those that are organically grown. Any form of manipulation, including the use of pesticides, has a negative impact on the initial electromagnetic state of food.

Electrons are in constant motion around the nucleus; protons and neutrons are in constant motion or vibration within the nuclei; and quarks (even smaller units) are also in constant motion within the protons and neutrons. It is possible to demonstrate the exact orbit and position of vibrations in laboratory tests, but by doing this we can only capture fractions of a moment in time of the position of the particles—protons, neutrons, electrons and photons. We know absolutely nothing about their vibrational relationship to each other, how they relate to each other, and what influences can change the resonance. We focus on many single momentary observations, which we add up to construct a theory, which in turn is basically just a collection of impressions of momentary glimpses. This does not take into account the internal interactions of the observed system.

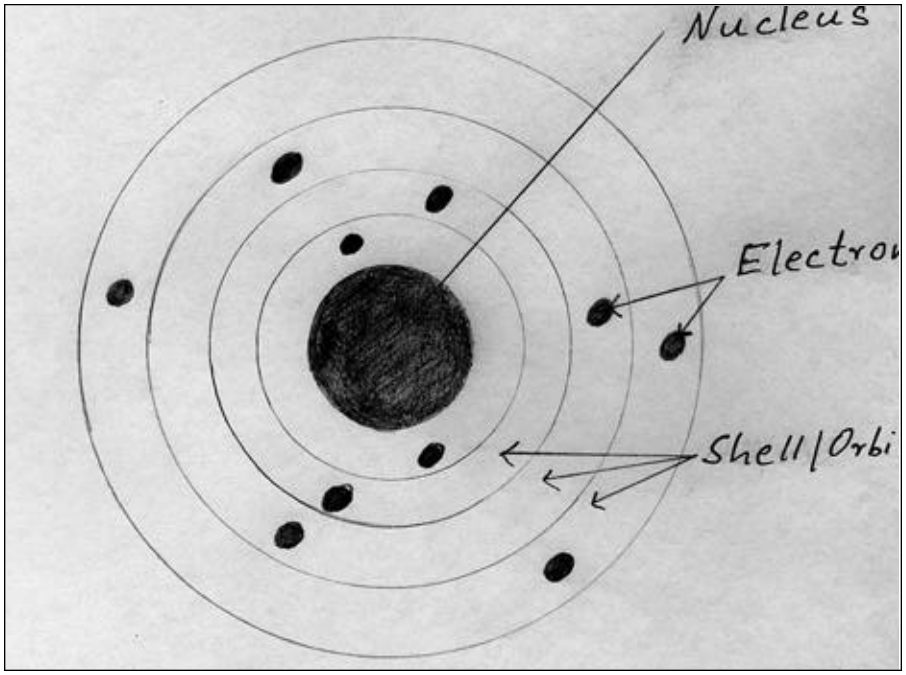

Illustration 3

In modern physics it is very important to understand how the photon moves in the space-time continuum, as photons are the carriers of electrical forces. If two electrons approach each other, they will repel each other because of their electrical charge. The photon is set free from the electron it moves away from, and is then in turn absorbed by the other electron which is going to move

onto a higher orbit. A photon moving in the space-time continuum spontaneously creates an electron/positron pair. Positrons have the same mass as electrons, but are moving in another direction and are charged positively.

For every particle there is an antiparticle that possesses the same mass, the same spin and the same lifespan but has an opposite charge. If an unstable particle breaks down into other elementary particles, the antiparticle will also break down into antiparticle products. The photon or light quantum is identical to its antiparticle. If one particle interacts with its antiparticle, both particles are being destroyed and energy is transformed into photons or mesons.[12]

Thus we can assume that all material forms and systems—as well as non-material forms, i.e., those that are not visible to us—move in a specific wave-resonance field. Also, that although this balance is very stable, it is at the same time unstable. Any disturbance or perturbation within this vibrational field will trigger changes. If an object is excited to higher pulsations, this will change the whole field, including the entire resonance of its surrounding area, and will also affect its resonance with other objects.

Normal cells and tissue as well as biophotons resonate in specific wave patterns. Free-radical lipids of liver, brain and gall luminesce in the blue-green and red of the spectral image range. Normal tissue can adjust quickly and be flexible to constant changes. In most circumstances, the automatic feedback system of the human body has the ability to restore itself to its optimum state. Tumour tissue, however, can be defined as having lost its inner coherent program and thus lost the ability to react in resonance to changing situations. As a consequence, tumour tissue is no longer able to communicate coherently via the biophotons.[13]

... the biophoton theory offers a model where life and all particles of a system relate to each other coherently and where they communicate with each other ... to produce the optimal condition for the entire system.

DNA, LIGHT AND INFORMATION

DNA is the central storage repository for light in our body and is twisted around itself in a double helix which can turn right or left. It belongs to the group of nucleic acids, of which there are two chains: the DNA and the RNA. DNA and RNA are built like a helix. Both strands form the structure and consist of sugars and phosphate groups that show a basic reaction. The links are attached to the sugars and are basic. However, there are only four bases in the DNA: adenine, thymine, cytosine and guanine. These are generally referred to by their initials, A, T, C, G, where A can occur only if paired with T and if C is paired with G. The base sequence has been described as our genetic code so far.

Only as recently as early February 2001, researchers realised that the DNA and RNA molecules are a laser-active medium and can produce an optical hologram that communicates with the resonance of the background fields of our Earth and the planets as well as galaxies.

However, 20 years ago, Popp developed an idea about this kind of interaction when he referred to the fact that cells—in particular, the DNA—do not simply absorb light but *emit it coherently*.

This means that they can give off light in a non-chaotic manner. "Coherency is the ability of waves to overlap, where spatially different sources of photons either strengthen or weaken each other. This results in a structured state where waves can form a coherent and communicating field, and this field is interactive to a high degree; in the case of non-coherent photons (chaotic or thermic), any interference causes them to collapse within seconds."[14]

Hence, the way ultra-weak luminescent cell radiation works is of significant importance. It does not radiate chaotically but behaves in a stable manner, phased like a laser—which is light in a coherent form.[15]

The biophoton theory is based on an interaction of cause and effect that is not linear or target-oriented, as understood by modern science, but instead fulfils its 'purpose' in a cooperative way.

Communication turns out to be one of our most basic properties; i.e., communication within the system as well as communication with the outside. The aim is to counteract entropy, loss of structure, chaos, a state of high disorder, so as to create and maintain a state of excitement. A high level of order within the body enables an undisturbed flow of information and communication. This in turn maintains the metabolism as well as all other life processes. The building and depletion of cells, the synthesis of proteins, carbohydrates and lipids as well as the flow of neurotransmitters and the entire cell metabolism all work on an extremely rapid transfer of information that can only be achieved by light transmission.

Lack of energy and blockages are signs of disturbance in the flow or process of life. This disturbance can occur on all levels,

Illustration 4

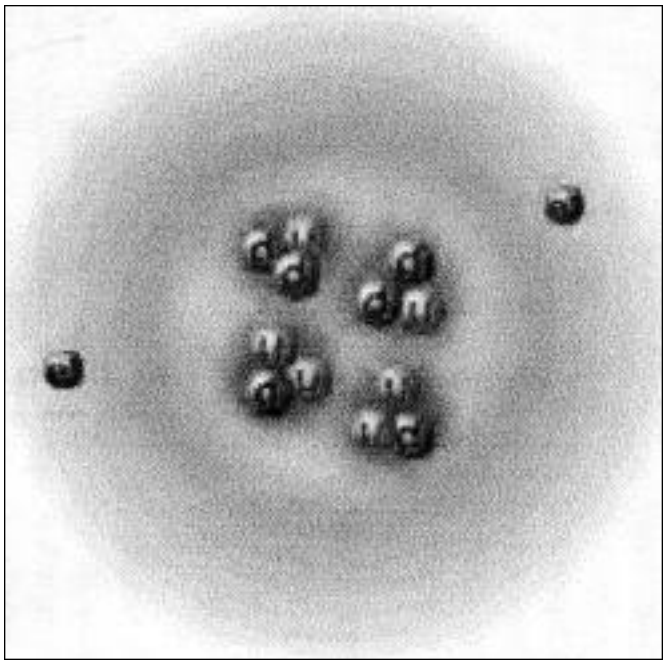

Illustration 5

whether atomic particle or cell, organ or psyche. Hence any disease can be interpreted as a manifestation of a loss of information and communication within the body!

In the world of our materialistic science based on Darwinism, everyone is fighting against everyone and even each gene tries to achieve an advantage over the other gene. In this concept of nature, where everyone is against everyone, there is no concept of interaction or cooperation. This general concept of life as war expresses itself in our medical language. We talk about the immune system as being the army leader against bacteria and viruses.[16]

In contrast to this, the biophoton theory offers a model where life and all particles of a system relate to each other coherently and where they communicate with each other to achieve a sensible cooperation in order to produce the optimal condition for the entire system.

Light emission is strongest whenever DNA is reproduced. About 90 per cent of the biophotons are emitted in the cell nucleus by the DNA. However, according to current mainstream scientific understanding, the DNA does not participate in metabolism. I consider this to be a very linear way of looking at the body and its functions. The DNA is an excellent storage medium for light and thus also for oxygen because of its form, the double helix. Perhaps this is why DNA is the basis for all processes occurring in the body—and thus also participates in metabolism.

At least two functions are currently assigned to the DNA: the coding of genetic information, which is passed onto the next generation in the germ cell, and the storing of information to build all cell components. The coherent light from the DNA controls all important biochemical and changing processes. These processes are the result of information carried by photons.

The knowledge about the tasks, functions and the meaning of DNA is not new. When the anthropologist Jeremy Narby lived in the jungle with the Peruvian Indians, he discovered that their phenomenal knowledge about plants and their biochemical reactions included knowledge about the DNA, which was symbolised by two dancing snakes.[17] These shamans go into contact with the energies, with the resonance field of themselves, the plants and the other person, and thus are able to obtain information not only about the use and application of healing medicines but also about the type of disease and its cause. The Curanderos of Mexico work in a similar way. They go into contact with the resonance field of the sick person as well as their environment to obtain more detailed information about healing possibilities.

The most recent realisation of modern science—that DNA and RNA produce optical holograms and are in resonance with all background fields—corresponds with the understanding and approach of the shamans of old, and also with the world concept of many holistic colour therapists.

Continued next issue...

About the Author:

Christa Muths, BSc., MA, MSc, NFSH, MIAC, is a member of the New York Academy of Science and the Scientific and Medical Network, UK, as well as the author of numerous articles and four books on holistic healing and energy therapy.

Christa is an accredited spiritual teacher and healer, and in 1991 founded ***espacio***, the International Centre for Holistic Studies. She is also the publisher/editor of ***espacio-time***, a quarterly magazine dedicated to the integration of body, mind and spirit, covering science, medicine, philosophy and spirituality in theory as well as practice. ***espacio*** offers a range of accredited diploma courses in various holistic modalities including colour therapy.

For further information, visit the ***espacio-time*** website at www.espacio-time.com.

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